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## **Hill Air Force Base, Utah**

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### *Environmental Assessment*

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#### **Final**

#### **Enhanced Use Leasing West Side Development: Phase I South**

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**September 2006**

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*Hill Air Force Base, Utah*

Final  
Environmental Assessment  
for Enhanced Use Leasing, West  
Side Development Phase 1 South

Prepared for:

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SEPTEMBER 2006

# ES.0 Executive Summary

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## ES.1 Purpose and Need

ES.1.0.1 This Environmental Assessment (EA) has been developed to analyze and document potential environmental and socioeconomic consequences associated with the proposed project called the West Side Development (WSD), Phase 1 South. Phase 1 South involves developing approximately 44 acres of currently vacant property. Administrative office space and parking lots comprise the proposed development. Roads and utility infrastructure will be added to the vacant acreage during construction. Structures built during this phase would be used to accommodate administrative personnel who currently work at the base.

ES.1.0.2 Phase 1 South is the second component of the Hill Air Force Base (Hill AFB) West Side Development. The first component of the WSD project was addressed in the *Environmental Assessment for the Space and Missile Facility* (Space and Missile EA) (JBR, 2005). Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. Findings and conclusions of the 2005 effort are incorporated by reference.

## ES.2 Selection Criteria and Alternatives Considered

ES.2.0.1 The WSD consists of three phases. Phase 1 involves construction of the Space and Missile Complex, addressed in the Space and Missile EA (JBR, 2005), and the proposed Enhanced Use Leasing development, which is addressed in this EA. Phase 2 involves development of additional administrative space in approximately 10 to 20 years from the date of approval by the Secretary of the Air Force (to proceed with the WSD). Phase 3 also involves commercial mixed use development, but would proceed in 15 to 25 years from the date of WSD approval. As additional WSD phases become defined enough to support environmental analysis, additional EAs will be performed.

ES.2.0.2 Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. The subject property has been proposed as the location for the WSD, Phase 1 South. This EA addresses only the Phase 1 South portion of the WSD because it is the only phase for which there is currently enough information to conduct an environmental analysis. The following alternatives were evaluated to determine the most efficient construction process:

- **Proposed Action:** Construct administrative office space, east of the intersection of Wardleigh Road and M Street.
- **Alternative 1:** Construct administrative space in another area of Hill AFB.
- **No-Action Alternative:** Continue use of existing World War II era structures.

**ES.2.0.3** Because site selection has already occurred for the initial portion of the WSD, it is not necessary to evaluate additional locations. Therefore, evaluation of another base location has been dismissed from further consideration.

## **ES.3 Impact on Resources**

**ES.3.0.1** Based on the evaluation of environmental consequences in the EA, the Proposed Action would not cause any significant negative environmental effects. Furthermore, air, water, and soil resources would not be negatively impacted by the Proposed Action.

**ES.3.0.2** Due to current and future land use of Hill Air Force Base, the No-Action Alternative would have no change in its impact on the current environment. In the future, the No-Action Alternative could have a significant, negative impact on worker health and safety if currently encapsulated material – such as asbestos and residual hazardous materials from previous uses – are disturbed and become airborne during remodeling activities.

## **ES.4 Conclusion**

**ES.4.0.1** The findings of this EA indicate that the Proposed Action to construct administrative space east of the Hill AFB West Gate will not have significant adverse effects on the human environment or any of the environmental resources as described in the EA. Therefore, it is concluded that the issuance of a Finding of No Significant Impact is justified, and an Environmental Impact Statement is not required.

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# Acronyms

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AFB	Air Force Base
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health Program
AICUZ	Air Installation Compatible Use Zone
AMA	Air Materiel Area
CAA	Clean Air Act
CFR	Code of Federal Regulations
dB	Decibel
EA	Environmental Assessment
ECZ	Explosive Clear Zone
EM	Environmental Management Division
EPA	United States Environmental Protection Agency
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
OO-ALC	Ogden Air Logistics Center
USAF	United States Air Force
WSD	West Side Development



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# 1.0 Purpose of and Need for the Proposed Action

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## 1.1 Purpose of and Need for the Proposed Action

1.1.0.1 The purpose of this Environmental Assessment (EA) is to support the decision making process in compliance with the National Environmental Policy Act of 1969 (NEPA). It addresses the proponent's (the Ogden Air Logistics Center [OO-ALC] Strategic Planning Division, Planning and Integration Directorate) Proposed Action and reasonable alternatives to the Proposed Action. This EA has been developed to analyze and document potential environmental consequences associated with the proposed activities. If the analyses presented in the EA indicate that implementation of the Proposed Action would not result in significant environmental or socioeconomic impacts, then a Finding of No Significant Impact will be issued (Appendix A). If environmental effects result that cannot be mitigated to incognizance, an Environmental Impact Statement will be required, or the Proposed Action will be abandoned and no action will be implemented.

1.1.0.2 Phase 1 South is the second component of the Hill Air Force Base (Hill AFB) West Side Development. The first component of the West Side Development (WSD) project was addressed in the *Environmental Assessment for the Space and Missile Facility* (Space and Missile EA) (JBR, 2005). Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. Findings and conclusions of the 2005 effort are incorporated by reference.

1.1.0.3 Phase 1 South involves developing approximately 44 acres of currently vacant property. Figures 1-1 and 1-2 show the location of the proposed site. Administrative space and parking lots comprise the proposed development. Roads and utility infrastructure will be added to the vacant acreage during construction. Structures built during this phase would be used to accommodate administrative personnel who currently work in the "1200 Area" of the base (indicated in Figure 1-2).

## 1.2 Location of the Proposed Action

1.2.0.1 Hill AFB is located in northern Utah, approximately 25 miles north of Salt Lake City and 5 miles south of Ogden, as shown in Figure 1-1. Hill AFB occupies approximately 6,700 acres in Davis and Weber counties. The western boundary of the Base is Interstate 15, and the southern boundary is State Route 193. The privately owned Davis-Weber irrigation canal bounds the northern and northeastern perimeters, and the southeastern boundary borders a municipal incineration facility and open farmland adjacent to private residences.

1.2.0.2 Phase 1 South is located east of the Hill AFB West Gate. The subject property is bounded on the north by Alabama Drive, on the west and south by Wardleigh Avenue, and on the east by the railroad easement (see Figure 1-2). Buildings 1552 and 10990 are currently

located within the subject property boundaries. Building 1552 is a modular-construction facility which houses administrative functions associated with the Strategic Arms Reduction Treaty. Building 10990 is a substation.

## **1.3 Applicable Regulatory Requirements**

**1.3.0.1** This section addresses several regulatory environmental programs that apply to the Proposed Action. Areas where these programs influence the decisionmaking process include environmental policy, human health and safety, air quality, soil and water quality, biological resources, land and cultural resources, and environmental justice/protection of children.

### **1.3.1 Environmental Policy**

**1.3.1.1** NEPA requires that environmental information be made available to officials and citizens prior to any action being taken. The NEPA process is intended to help officials make decisions based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

**1.3.1.2** 32 Code of Federal Regulations (CFR) 989 implements the Air Force Environmental Impact Analysis Process. It describes specific tasks and procedures to ensure compliance with NEPA.

### **1.3.2 Human Health and Safety**

**1.3.2.1** The Occupational Safety and Health Act of 1970 requires that employers provide safe and healthful working conditions. This act provides an enforcement mechanism for minimizing occupational hazards and exposure.

**1.3.2.2** Air Force Instruction 91-301 [Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program] details the AFOSH program. The purpose of the AFOSH program is to minimize loss of Air Force resources and to protect Air Force personnel from occupational deaths, injuries, or illnesses by managing risks.

### **1.3.3 Air Quality**

**1.3.3.1** The 1970 Clean Air Act (CAA) and its 1990 amendments establish federal policy to protect and improve the nation's air quality while protecting human health and the environment. The CAA requires that adequate steps be taken to control the release of air pollutants and prevent significant deterioration in air quality. The Utah Department of Environmental Quality, Division of Air Quality has enforcement power on behalf of the United States Environmental Protection Agency (EPA).

**1.3.3.2** The proposed action occurs in an area that is in attainment status for all National Ambient Air Quality Standards (NAAQS). Therefore, the federal conformity requirements of 40 CFR 93.153 do not apply, and a conformity analysis is not required.

### 1.3.4 Soil and Water Quality

1.3.4.1 The objective of the Clean Water Act of 1977 is to restore and maintain the chemical, physical, and biological integrity of United States waters. The Water Quality Act of 1987 established a program for the identification of waters affected by toxic pollutants, and implementation of specific controls to reduce those toxics.

1.3.4.2 Air Force Instruction 32-7064, *Integrated Natural Resources Management*, explains how to manage natural resources on Air Force property in compliance with federal, state, and local standards. This instruction gives installations a framework for documenting and maintaining Air Force natural resource programs.

### 1.3.5 Biological Resources

1.3.5.1 The Endangered Species Act of 1973 requires federal agencies that fund, authorize, or implement actions to avoid jeopardizing the continued existence of federally-listed threatened or endangered species, or destroying or adversely affecting their critical habitat. Federal agencies must evaluate the effects of their actions through a set of defined procedures, which may include preparation of a Biological Assessment and formal consultation with the U.S. Fish and Wildlife Service.

1.3.5.2 The purpose of the Endangered Species Act is to establish conservation methods for both endangered and threatened species and the ecosystems upon which the endangered and threatened species depend. This act also requires all Federal agencies to cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.

### 1.3.6 Land and Cultural Resources

1.3.6.1 The National Historic Preservation Act (NHPA) of 1966 provides the principal authority used to protect historic properties, establishes the National Register of Historic Places, and defines, in Section 106, the requirements for Federal agencies to consider the effects of an action on properties on or eligible for listing on the National Register.

1.3.6.2 Protection of Historic and Cultural Properties (36 CFR 800 [1986]) provides an explicit set of procedures for federal agencies to meet their obligations under the NHPA, including resource inventory and consultation with State Historic Preservation Officers.

1.3.6.3 The Archeological Resources Protection Act of 1979 ensures that federal agencies protect and preserve archeological resources on Federal or Native American lands and establishes a permitting system to allow legitimate scientific study of such resources.

1.3.6.4 Air Force Instruction 32-7065, *Cultural Resources Management Program*, sets guidelines for protecting and managing cultural resources in the United States and United States territories and possessions.

### 1.3.7 Environmental Justice/Protection of Children

1.3.7.1 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, is designed to focus the attention of federal agencies on the human health and environmental conditions in minority and low-income

communities. It requires federal agencies to adopt strategies addressing environmental justice concerns within the context of agency operations.

1.3.7.2 Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, directs federal agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children and ensure that policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

## 1.4 Scope and Organization of the Document

1.4.0.1 The scope of this EA is to define issues that potentially impact construction of approximately 44 acres of administrative office space. The following potential issues are presented and discussed in detail in Sections 3.0 and 4.0 of this EA: aircraft operations, noise, air quality, safety and occupational health, earth resources, water resources, infrastructure/utilities, hazardous materials and wastes, biological resources, cultural resources, and socioeconomic resources.

1.4.0.2 The administrative record for this project contains all scoping information, site inspection notes, and correspondence compiled during the preparation of this EA. The Administrative Record for this project is available on request from the Hill AFB Environmental Management Division.

1.4.0.3 The remainder of this document is organized as follows:

- **Section 2.0** – Description and evaluation of the Proposed Action Alternative 1, and the No-Action Alternative
- **Section 3.0** – The existing conditions and environmental resources in the area to be affected by the alternatives
- **Section 4.0** – Contains the basis for the comparison of the environmental consequences of each of the alternatives
- **Section 5.0** – A list of preparers and their responsibilities
- **Section 6.0** – A list of agencies and persons contacted during the preparation of this EA, including the topic of consultation and date contacted
- **Section 7.0** – References used in preparation of this EA
- **Appendix A** – The Finding of No Significant Impact
- **Appendix B** – List of threatened, endangered, and sensitive species
- **Appendix C** – Response to comments on Proposed Final EA

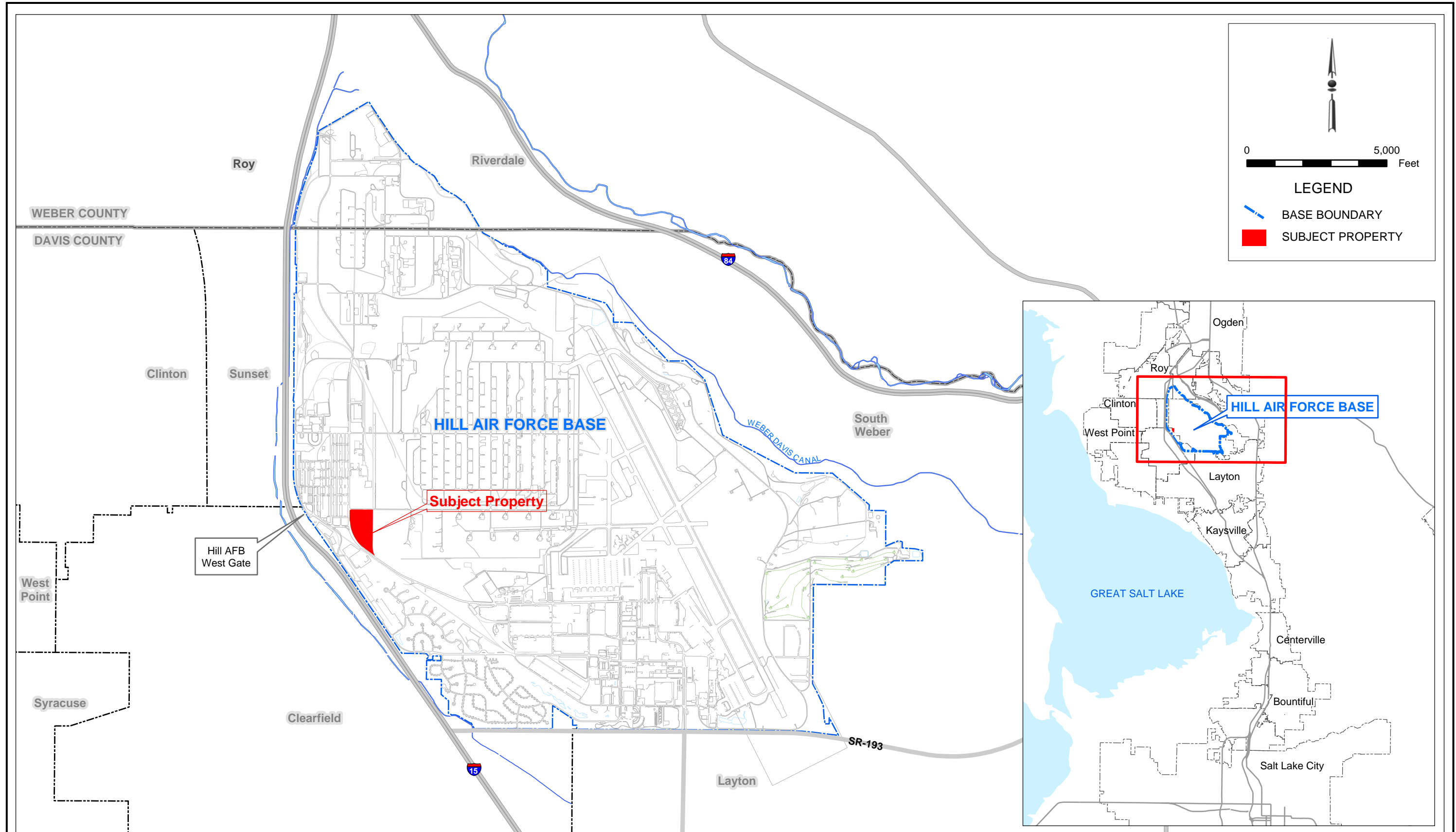


FIGURE 1-1  
**LOCATION MAP**  
HILL AIR FORCE BASE, UTAH



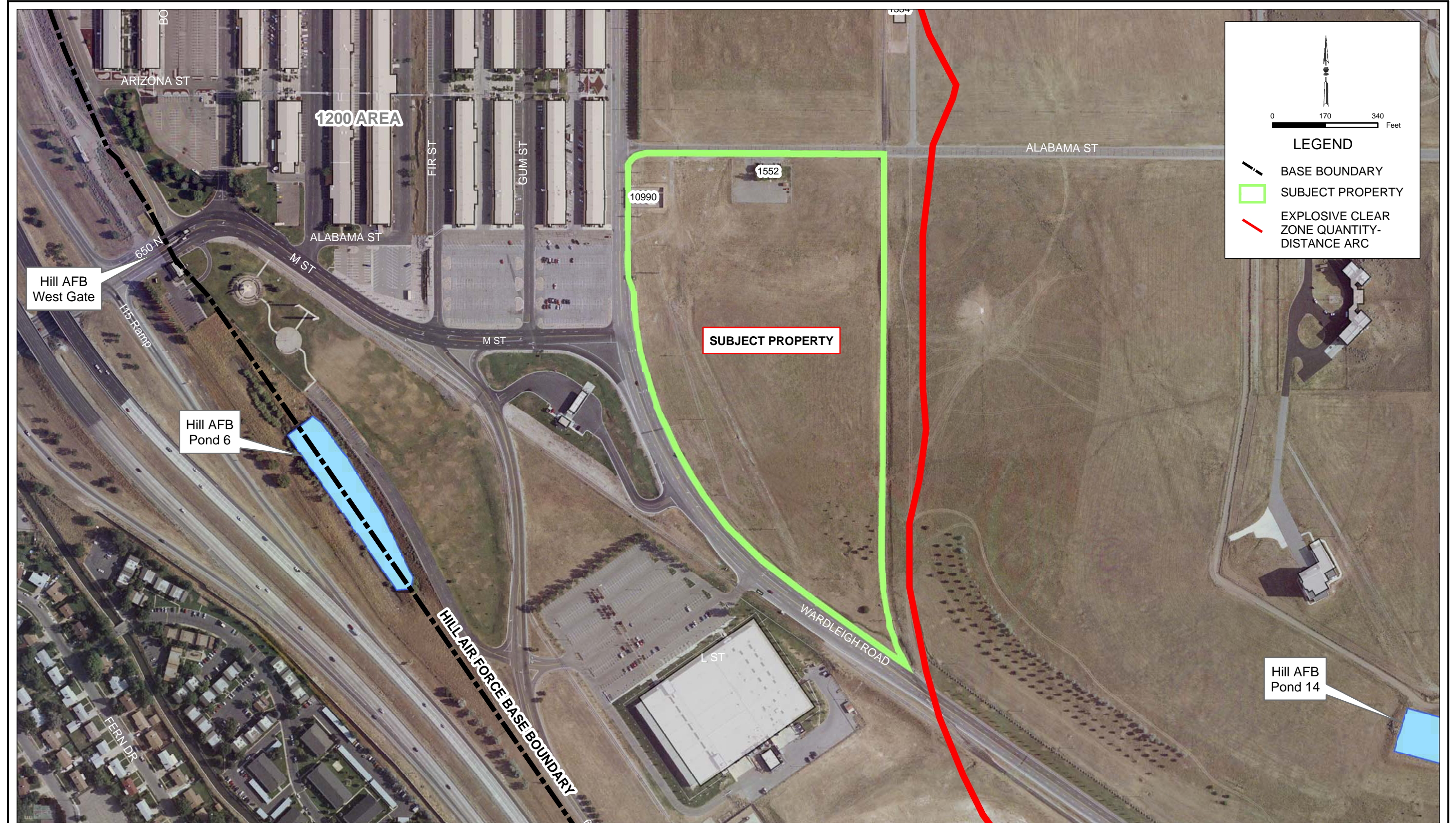


FIGURE 1-2  
**SUBJECT PROPERTY**  
HILL AIR FORCE BASE, UTAH



## 2.0 Description of the Proposed Action and Alternatives

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### 2.1 Introduction

2.1.0.1 The Proposed Action, Alternative 1, and the No-Action Alternative are described in this section. The selection criteria used to compare each alternative action is also described. A discussion of the environmental consequences of each action is presented in Section 4.0.

### 2.2 History of the Formulation of Alternatives

2.2.0.1 Most of the structures comprising the western boundary of Ogden Air Logistics Center (OO-ALC) were constructed during World War II and were intended to be used as small warehouses. Currently, these structures provide office and warehouse space for program and supply chain management and warfighter support activities. The structures have deteriorated and are inappropriately sized for their current missions.

2.2.0.2 The HVAC systems often work poorly, creating uncomfortable working conditions that lower productivity and quality of life of the Air Force's employees. Maintenance of existing HVAC systems wastes both limited energy resources and Air Force dollars. Building roofs are nearing the end of their useful lives and must soon be replaced. Buildings are too small for optimum collaboration, are becoming structurally unsafe, and are soon to be condemned and unusable. Parking is overcrowded and does not meet current Anti-Terrorism Force Protection (ATFP) rules. Most buildings contain encapsulated asbestos, lead-based paint and other residual hazardous substances from previous activities.

2.2.0.3 Annual operations and maintenance costs for these facilities exceed \$5.00 per square foot. This is the minimum cost required to extend a building's safe and useable life given the inevitable deterioration and implied costs as the facilities continue to age and the future increase in costs of construction and materials. In addition to operation and maintenance costs, minimum renovation costs are expected to exceed \$750,000.00 per facility. Approximately one hundred substandard facilities are located in the WSD area. Costs to completely renovate these facilities would exceed replacement cost based on the need for demolition and construction. Unfortunately, military construction funding for such a massive effort is not readily available. New construction cost is estimated to be \$284.39 per square foot; maintenance costs for these new facilities would be 30 percent less than maintaining existing structures (Malcolm Pirnie, 2006).

2.2.0.4 Program and supply chain management efficiency could be increased by creating closer ties among all parties involved with program and supply chain management and warfighter support activities. Creating campus-style complexes allows entire organizations



to become collocated; thereby increasing efficiency of operations and reducing future energy costs and waste streams.

**2.2.0.5** The WSD is a plan to develop approximately 600 acres of land along the western boundary of Hill AFB. The proposed development runs parallel to I-15. Newly constructed facilities will house government employees, contractors with the Department of Defense, and private employees with occupations consistent with the missions of Hill AFB. WSD involves the construction of facilities to support base operations. Additionally, development may include hotel/motel operations, stores, markets, coffee shops and other strictly civilian commercial enterprises. No family or residential housing use is proposed.

**2.2.0.6** Air Force land will be leased to an organization experienced in public and private development in Utah. This organization will serve as the master lessee of the land, participate in the selection of a developer, and engage in leasing and management activities. The Air Force will maintain ownership of the land.

**2.2.0.7** The WSD consists of three phases. Phase 1 involves construction of the Space and Missile Complex, addressed in the Space and Missile EA (JBR, 2005), and the proposed Enhanced Use Leasing development, which is addressed in this EA. Phase 2 involves development of additional administrative space in approximately 10 to 20 years from the date of approval by the Secretary of the Air Force (to proceed with the WSD). Phase 3 also involves commercial mixed use development, but would proceed in 15 to 25 years from the date of WSD approval. As additional WSD phases become defined enough to support environmental analysis, additional EAs will be performed.

**2.2.0.8** Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. The subject property has been proposed as the location for the WSD, Phase 1 South. This EA addresses only the Phase 1 South portion of the WSD because it is the only phase for which there is currently enough information to conduct an environmental analysis. The following alternatives were evaluated to determine the most efficient construction process:

- **Proposed Action:** Construct administrative office space, east of the intersection of Wardleigh Road and M Street.
- **Alternative 1:** Construct administrative space in another area of Hill AFB.
- **No-Action Alternative:** Continue use of existing World War II era structures.

## 2.3 Identification of Alternatives Eliminated from Further Consideration

### 2.3.1 Alternative 1—Construct Administrative Space in Another Area of Hill AFB

**2.3.1.1** Alternative 1 involves constructing the proposed administrative office space in another location within Hill AFB boundaries. Because site selection has already occurred for the initial portion of the WSD, it is not necessary to evaluate additional locations. Therefore, evaluation of another base location has been dismissed from further consideration.

## 2.4 Detailed Description of the Proposed Action

2.4.0.1 Construction of the Proposed Action would consist of approximately 44 acres of vacant property, east of the intersection of Wardleigh Road and M Street (See Figure 1-2). The northern boundary of the subject property would be Alabama Drive. The eastern extent would be bounded by the abandoned railroad bed. Wardleigh Road bounds the subject property on the west and south.

2.4.0.2 Administrative office space would be built in a series of facilities two to three stories high. The total number of square feet in each facility would depend upon the lease value the Air Force can recover from the EUL arrangement. That value is based upon potential market demand for the remainder of the EUL WSD project. In order to complete the Phase 1 South development, access roads, off-street parking and utility infrastructure would be added to the vacant acreage.

## 2.5 Description of the No-Action Alternative

2.5.0.1 Under the No-Action Alternative, Hill AFB would continue utilizing inadequate and unsafe facilities. The current working conditions are substandard and adversely affect the morale and well-being of assigned military, civilian, and contractor personnel.

## 2.6 Comparison Matrix of Environmental Effects of all Alternatives

2.6.0.1 A summary of the environmental effects of the Proposed and No-Action alternatives is presented in Table 2-1. Based on the information presented in this table, no effects are anticipated for aircraft operations, water resources, hazardous materials and waste, cultural resources, and environmental justice. Potential impacts including noise, air quality, safety and occupational health, soils, transportation systems, vegetation, and socioeconomics are detailed in Sections 3.0 and 4.0.

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TABLE 2-1

Comparison Matrix of Environmental Effects

*Environmental Assessment for Enhanced Use Leasing, West Side Development Phase 1 South*

Resource Category	Proposed Action	No-Action
Aircraft Operations	No Effect	No Effect
Noise	Short-term construction noise	No Effect
Air Quality	Short-term fugitive dust	No Effect
Safety and Occupational Health	-Improved working environment improves overall well being of employees.	AT/FP issues unresolved for 1200 Area.
Earth Resources		No Effect
Geology	No Effect	
Topography	No Effect	
Soils	Disturbed soils subject to wind erosion	
Water Resources	No Effect	No Effect
Surface Water		
Groundwater		
Infrastructure/Utilities	Minimal Impact	No Effect
Sanitary Sewer		
Potable Water		
Solid Waste Management		
Storm Drainage		
Transportation Systems	Potential construction related traffic delays on Wardleigh Road, M Street, and Alabama Street.	
Electricity/Natural Gas		
Hazardous Materials and Wastes	No Effect	Potential future exposure of asbestos in asbestos-containing materials and lead exposures from lead-based paint as buildings continue to deteriorate.
Hazardous Materials		
Hazardous Waste		
Biological Resources		No Effect
Vegetation	-Removal of grass/weed vegetation on portion of site. -Addition of developed landscape.	
Wildlife	No Effect	
Threatened and Endangered Species	No Effect	
Wetlands	No Effect	
Floodplains	No Effect	

TABLE 2-1

Comparison Matrix of Environmental Effects

*Environmental Assessment for Enhanced Use Leasing, West Side Development Phase 1 South*

<b>Resource Category</b>	<b>Proposed Action</b>	<b>No-Action</b>
Cultural Resources Historical Resources Archaeological Resources	No Effect	No Effect
Socioeconomic Resources	-Short term revenue to local contractors. -Utility and maintenance costs not paid by Hill AFB	Hill AFB would incur very high maintenance and repair costs for existing facilities, exceeding replacement costs
Environmental Justice	No Effect	No Effect
<hr/>		
Processes Identified for Completion Prior to Construction Site Preparation	Construction Stormwater Runoff Controls Permit	None

## 3.0 Affected Environment

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### 3.1 Introduction

3.1.0.1 The existing conditions in the areas to be affected by the Proposed Action, and the environmental resources at Hill AFB, are described in this section. Section 2.6 identified six resource categories that will not be carried forward in this evaluation. Rationale for eliminating each of these categories is included below in Section 3.2. A discussion of seven affected resource categories follows in Section 3.3.

### 3.2 Resource Categories Eliminated from Further Study

#### 3.2.1 Aircraft Operations

3.2.1.1 The Maintenance Directorate at Hill AFB provides depot repair, modification, and maintenance support to major aircraft weapons systems, specifically the F-16 Fighting Falcon, A-10 Thunderbolt, C-130 Hercules, and the Peacekeeper and Minuteman Intercontinental Ballistic Missiles. The Maintenance Directorate also tests, repairs, manufactures, and modifies F-4, F-16, F/A-22, F-111, C-130, A-10, and B-2 aircraft (Hill AFB, 2003). The subject property is vacant, not utilized for aircraft operations, nor planned for use by personnel involved in aircraft operations.

#### 3.2.2 Water Resources

3.2.2.1 **Surface Water.** The Davis-Weber irrigation canal bounds the northern and northeastern perimeter of the base. Stormwater retention ponds are located throughout the base. The closest of these to the subject property are Stormwater Retention Pond 6 and Stormwater Retention Pond 14, which are located approximately 750 feet to the west and 1500 feet to the east, respectively (See Figure 1-2). Pond 14 is located upgradient from the subject property; therefore storm flows from the subject property which have not percolated into the ground would most likely navigate to Pond 6. Pond 14 is typically dry except immediately after a heavy rainfall, when it temporarily stores excess stormwater runoff while the capacity of the storm drain system is exceeded. Once the flow in the storm drains falls below capacity, the retained stormwaters are drained from the pond. Pond 6 typically contains water throughout the year, although some summers it will be dry. There are no surface water bodies in the immediate vicinity of the subject property.

3.2.2.2 **Construction Stormwater Runoff Permit.** Since the area to be developed and disturbed by construction equipment exceeds one acre, a Notice of Intent for a Construction Stormwater Runoff Permit will be obtained as part of the Utah General Stormwater Permit (Permit #UTR100000, Part III D), and a Construction Stormwater Control Plan will be developed and implemented. This prevents runoff during construction from leaving the subject property and impacting other areas of the base. A Notice of Termination will be submitted upon construction completion.

**3.2.2.3 Groundwater.** Three groundwater aquifers lie beneath Hill AFB. The shallow, unconfined aquifer and two confined aquifers called the Sunset and Delta aquifers. To date, the shallow groundwater aquifer beneath Hill AFB has not been formally classified under Utah Administrative Code R317-6, Groundwater Quality Protection. However, based on the available groundwater quality data, the shallow groundwater would be designated as Class II – Drinking Water Quality, based on State of Utah classification criteria. At sites under investigation and remediation by Hill AFB, regulated contaminant concentrations exceed groundwater quality standards, and the shallow aquifer would be classified as Class III – Limited Use Groundwater. The Sunset and Delta aquifers are located approximately 500 to 1000 feet below ground surface at Hill AFB, respectively, and are presently used as drinking water sources. Both aquifers are classified as Class IA – Pristine Groundwater. No contamination has been identified in either of the deeper aquifers (Loucks, 2006).

**3.2.2.4** The Proposed Project will not adversely affect groundwater. The only effect the Proposed Project will have on groundwater is that as portions of the subject property are developed, the infiltration of rainfall into the ground will be reduced on those developed portions of the site. This reduction will be offset by irrigation of landscaped areas so that no net effect on groundwater is anticipated.

### **3.2.3 Hazardous Materials and Hazardous Waste**

**3.2.3.1** The subject property is not associated with any industrial uses, nor has it been in the past. Furthermore, no hazardous materials or petroleum products were identified at the subject property during the May 2006 site visit. Additionally, no potential source areas were identified on the subject property in the *North Area Preliminary Assessment Report* (Hill AFB, 1995). No hazardous materials or hazardous waste are proposed for storage as part of the Proposed Action.

### **3.2.4 Biological Resources**

**3.2.4.1 Wildlife.** Hill AFB is an industrial setting, with limited areas of natural habitat. No critical wildlife habitat is included in the Subject Property; therefore, wildlife species would not be adversely impacted by the Proposed Action.

**3.2.4.2 Threatened and Endangered Species.** As part of the Air Force's obligation to identify and manage natural resources, comprehensive species inventories have been conducted on Hill AFB in the vicinity of the subject property for plants, mammals, birds, rodents, butterflies, and insects. No resident threatened or endangered species or state species of concern have been found in the area. The Air Force generated a spreadsheet (included in Appendix B) to identify potentially occurring threatened, endangered, and sensitive species on Hill AFB. The spreadsheet lists known occurrences of these species within a ten mile radius of Hill AFB. Based on this information, which the Air Force obtained from the Utah Natural Heritage Program, the only federally listed species believed to have a potential presence within 10 miles of Hill AFB include the bald eagle (*Haliaeetus leucocephalus*), desert tortoise (*Gopherus agassizii*), June sucker (*Chasmistes liorus*) and Ute ladies' tresses (*Spiranthes diluvialis*). None of these species have been found to reside on Hill AFB (Moss, 2006).

3.2.4.3 In addition, according to data provided by the Utah Division of Wildlife Resources, threatened or endangered species occurring or possibly occurring in Davis County include the yellow-billed cuckoo (*Coccyzus americanus*), razorback sucker (*Xyrauchen texanus*), California condor (*Grus americana*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii extimus*), and Utah prairie dog (*Cynomys parvidens*). None of these species have been found to reside on Hill AFB. There is no critical or important habitat present in the area of the subject property (Moss, 2006); therefore, threatened and endangered wildlife species would not be affected by the Proposed Action.

3.2.4.4 **Wetlands and Floodplains.** None of the approximately 20 acres of Hill AFB wetlands are located near the Subject Property. Only a portion of the nearly 20 acres of wetlands are jurisdictional. Additionally, there are no floodplains in the vicinity of the Proposed Action.

### 3.2.5 Cultural Resources

3.2.5.1 Hill AFB has three proposed historic districts: the Ogden Arsenal/Ogden Air Materiel Area (AMA) Historic District, the Hill Field Historic Housing District, and the Strategic Air Command Alert Historic District. Buildings 1552 and 10990, currently located within the subject property, are in the boundaries of the Ogden Arsenal/Ogden AMA Historic District. However, Building 1552 is not yet historic, and 10990 is not Cold War eligible and is not a contributing element to the district. No archaeological sites have been identified either on or in the immediate vicinity of the subject property (Hirschi, 2006).

### 3.2.6 Environmental Justice

3.2.6.1 The Proposed Project would have no effect on environmental justice or children. There is no expected change in the demographic profile of any group in the area surrounding the base. No minority or low-income groups or populations of children would be disproportionately impacted by the Proposed Action. Additionally, the No-Action Alternative would have no effect on environmental justice issues.

## 3.3 Description of the Current Environment

3.3.0.1 This section presents a discussion of the resources present at Hill AFB, as well as potential issues which must be considered prior to proceeding with the Proposed Action. This discussion focuses on the following areas: noise, air quality, safety and occupational health, soils, transportation systems, vegetation and socioeconomics.

### 3.3.1 Installation and Current Mission

3.3.1.1 Hill AFB covers about 6,700 acres, and is located in Weber and Davis Counties. Hill AFB has been the site of military activities since 1920, when the western portion of what is now the Base was activated as the Ogden Arsenal, which is an Army Reserve Depot. In 1940 and 1941, four runways were built and the Ogden Air Depot was activated. During World War II, the Ogden Arsenal manufactured ammunition and was a distribution center for motorized equipment, artillery, and general ordnance. The Ogden Air Depot's primary operation was aircraft rehabilitation. In 1948, the Ogden Air Depot was renamed Hill AFB, and in 1955, the Ogden Arsenal and Air Depot were transferred to the United States Air Force (USAF). Since 1955, Hill AFB has been a major center for missile assembly and aircraft



maintenance. Currently, Hill AFB is one of three USAF Air Logistics Centers, under the Air Force Materiel Command.

### **3.3.2 Noise**

3.3.2.1 Engine noise from the testing and flight of aircraft is present throughout the day although it is not persistent. In a typical year, more than 50,000 takeoffs and landings will be logged by locally based and transient aircraft (Hill AFB, 2003).

3.3.2.2 Noise contours have been modeled for aircraft operations in order to site noise sensitive functions on the base. Maximum mission noise contours have been mapped for this purpose. The subject property is located below the 65 decibel (dB) noise contour.

3.3.2.3 The Air Force has developed the Air Installation Compatible Use Zone (AICUZ) program to minimize development that is incompatible with aviation operations in areas on and adjacent to military airfields. AICUZ land use recommendations are based on uses compatible with exposure to aircraft noise and safety considerations. Recommended compatible land uses are derived from data on noise contours and safety zones.

### **3.3.3 Air Quality**

3.3.3.1 Air quality in the vicinity of Hill AFB (Davis and Weber Counties) is influenced by emissions from vehicular traffic, an offsite refinery, the Davis County Burn Plant, aircraft operations, and other on- and off-Base industrial sources. Hill AFB is located in both Davis and Weber counties. The EPA has designated this area of northern Davis County as an attainment area for all NAAQS (such as 8-hour ozone, carbon monoxide, lead, sulfur oxides, nitrogen oxides, particulate matter having a mean diameter of less than or equal to 10 microns [ $PM_{10}$ ] and particulate matter having a mean diameter of less than or equal to 2.5 microns [ $PM_{2.5}$ ]). This same area is in maintenance status for 1-hour ozone. Construction and development activities may temporarily increase fugitive  $PM_{10}$  emissions in the area of the subject property, but no NAAQS violations are expected to occur, as standard mitigation measures to reduce fugitive emissions will be utilized.

### **3.3.4 Safety and Occupational Health**

3.3.4.1 Anti-Terrorism/Force Protection (ATFP). Parking in the 1200 Area is inadequate to support the number of personnel supporting functions in that area of the base. In addition, the existing parking configuration does not meet ATFP guidelines for distance from structures.

3.3.4.2 Explosive Clear Zones (ECZ). Explosive Clear Zones are safety zones surrounding activities that handle, test, or store explosive materials. These types of activities typically occur in the center of Hill AFB, in an area that is zoned for industrial use. The Quantity-Distance Arc, which defines the boundary of the ECZ, is immediately east, but does not include any, of the subject property (See Figure 1-2).

### **3.3.5 Soils**

3.3.5.1 Much of Hill AFB has been developed for a variety of industrial uses to support the Hill AFB mission. A small remnant of property, located along the north end of Aspen

Avenue near the western boundary of Hill AFB, is used for gardens and farming by resident Base personnel. The gardens are approximately 1.8 miles northwest of the subject property.

3.3.5.2 Most of the soils within the subject property is currently undisturbed. Installation of Buildings 1552 and 10990 most likely resulted in minor surface disturbance.

### 3.3.6 Infrastructure

3.3.6.1 The Base infrastructure consists of systems that support Basewide activities. Examples of Base infrastructure include rail and other transportation facilities; industrial wastewater, stormwater, and sanitary sewer systems; fueling and defueling areas and facilities; electrical stations and power lines; surplus equipment and materials storage areas; and waste treatment or disposal areas. Structures in the vicinity of the subject property include roadways, stormwater, railways, and power lines.

3.3.6.2 Buildings 1552 and 10990 are currently located within the subject property boundaries. Building 1552 is a modular-construction facility which houses administrative functions associated with the Strategic Arms Reduction Treaty. Building 10990 is a substation.

### 3.3.7 Vegetation

3.3.7.1 Hill AFB is located in a geographic region that would typically support a mountain-brush type native plant community. Dominant vegetation in this plant community includes scrub oak (*Quercus gambelii*), big sagebrush (*Artemisia tridentata*), rabbit brush (*Chrysothamnus* sp.), and western wheatgrass (*Agropyron smithii*). However, much of Hill AFB has been developed, and the area is populated by introduced species. Only a small remnant of the native plant community occurs in the northern portion of the Base. Other microenvironments also exist at Hill AFB. One such environment is the stormwater retention basins that support vegetation associated with wetlands, including sedge grasses (*Carex* sp.), sandbar willow (*Salix exigua*), and cattails (*Typha latifolia*). Although Hill AFB supports a broad variety of plant life, no threatened or endangered plant species have been identified (Moss, 2006).

### 3.3.8 Socioeconomics

3.3.8.1 Presently, the Hill AFB work force comprises approximately 23,000 civilian, military, and contractor personnel. More than 50 percent of the personnel at the base are civilian. The workforce at Hill AFB is drawn from throughout northern Utah (Fisher, 2006).

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## 4.0 Environmental Consequences

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### 4.1 Introduction

4.1.0.1 The environmental consequences of developing the subject property is discussed in this section. This section also contains a discussion of the environmental consequences of the No-Action Alternative.

### 4.2 Change in Current Mission

4.2.0.1 No changes in the current mission of Hill AFB would occur as a result of the proposed construction. If the No-Action Alternative were adopted, Hill AFB personnel would continue to use small, inadequate, and in some cases unsafe facilities with high maintenance costs. This condition adversely affects the morale, well being, and retention rate of Hill AFB personnel.

### 4.3 Description of the Effects of all Alternatives on the Affected Environment

4.3.0.1 The following paragraphs discuss the resources present within the vicinity of the subject property, and potential impacts on these resources if the Proposed Action or the No-Action Alternative were implemented. This discussion focuses on the following areas: noise, air quality, safety and occupational health, soils, infrastructure, vegetation, and socioeconomics.

#### 4.3.1 Noise

4.3.1.1 No long-term exposure to additional noise would occur as a result of implementing the Proposed Action. Any noise generated during construction or renovation activities would be limited to areas immediately adjacent to the site. Any potential health concerns, for site workers or program participants exposed to excessive noise during these activities, would need to be addressed in the construction/remodeling plans.

4.3.1.2 If the No-Action Alternative is selected, extensive repairs and renovations of the existing World War II structures will be necessary. Construction noise will impact workers more than the Proposed Project; repairs/renovations would occur in the work areas, thereby directly impacting workers and exposing them to significant noise levels exceeding OSHA standards.

#### 4.3.2 Air Quality

4.3.2.1 Implementing the Proposed Action would not cause long-term effects on air quality because no air emission sources are being installed. The No-Action Alternative would have no impact on air quality.

4.3.2.2 Dust may be generated during construction, but control measures specified in the *Hill Air Force Base Main Base Fugitive Dust Control Plan* (Hill AFB, 2003a), will be used to keep dust to a minimum. Short-term fugitive emissions may result from internal combustion engines in heavy equipment utilized at the construction site. Hourly and annual emissions generated by traffic, associated with travel to and from the subject property, will be no different from the current setting since no increase in number of employees is planned as a result of this action.

### 4.3.3 Safety and Occupational Health

4.3.3.1 Relocating personnel to a more efficient, less costly, new, and more functionally compatible administrative complex improves the overall well-being of employees. Additionally, contractor, civilian, and military personnel will be able to locate in the same proximity, thereby increasing the efficiency of working relationships.

4.3.3.2 Selection of the No-Action Alternative could create safety and occupational health issues. The Heating, Ventilation, and Air Conditioning systems often work poorly, creating uncomfortable working conditions that lower productivity and quality of life of the Air Force's employees. The roofs are nearing the end of their useful lives and must soon be replaced. Buildings are too small for optimum collaboration.

4.3.3.3 Most buildings contain encapsulated asbestos, lead-based paint and other residual hazardous substances from previous activities. Potential future exposure could significantly impact worker health and safety, if the currently encapsulated materials are disturbed and become airborne during remodeling activities.

4.3.3.4 **Anti-Terrorism/Force Protection.** Parking in the 1200 Area is inadequate to support the number of personnel supporting functions in that area of the base. In addition, the existing parking configuration does not meet ATFP guidelines for distance from structures. Development of the campus-like setting provides an atmosphere compliant with ATFP guidelines.

### 4.3.4 Soils

4.3.4.1 Construction activities in the subject property may leave exposed and disturbed soil, susceptible to wind erosion. Mitigation measures will be used during construction to minimize fugitive dust emissions. Likewise, implementation of Best Management Practices in the Construction Stormwater Pollution Prevention Plan will mitigate soils from leaving the subject property via stormwater runoff. Most of the area will eventually be covered with asphalt, landscaped areas, or structures; therefore, future erosion will be kept to a minimum.

4.3.4.2 If soil contamination is encountered during construction activities, appropriate containment and disposal measures would be required. The Environmental Management Division (75 CEG/CEV) should be contacted to ensure proper handling of the soil.

4.3.4.3 Construction activities in the subject property will not impact the garden sites mentioned in Section 3.3.5.1.

### 4.3.5 Infrastructure

4.3.5.1 It is likely that sanitary sewers, potable water lines, electrical and natural gas lines will need to be extended into the subject property. To prevent a negative impact (causing a break in the storm sewer, etc.), the presence and location of utility lines in the vicinity of these properties must be confirmed by Red Stakes, at (801) 777-1995. In addition, any construction projects on Hill AFB property must involve the participation of the Civil Engineering Squadron, Base Community Planner, Mr. Albert Whipple. Mr. Whipple can be reached at (801) 777-1171. The No-Action Alternative would have no impact on utilities.

4.3.5.2 Potential construction related traffic delays may be present on Wardleigh Road, M Street, or Alabama Street. These delays are not expected to impact traffic flow at the West Gate. No traffic delays will occur in either the No-Action Alternative or in the Proposed Alternative (once construction is completed) because no increase in the number of employees and associated vehicular traffic is planned as a result of this action.

4.3.5.3 Under the proposed action, Building 1552 would be relocated to another area of the base during development of the subject property. The substation, identified as Building 10990, would remain in its current configuration and location. The No-Action Alternative would require no change for either structure.

### 4.3.6 Vegetation

4.3.6.1 Based on the current scope of activities planned for the area, there are no anticipated negative impacts to biological resources for either the Proposed Action or the No-Action Alternative.

4.3.6.2 During construction activities, grass and weed vegetation may be removed on a portion of site. This vegetation will be replaced with buildings, parking lots, sidewalks, and developed landscape.

### 4.3.7 Socioeconomics

4.3.7.1 Construction at the subject property may provide short term revenue to local equipment suppliers and construction workers. This is a minor positive impact for the surrounding community.

4.3.7.2 No additional jobs would be created as a result of the Proposed Action. Therefore, no demographic impact is expected.

4.3.7.3 The ground lease and management and development agreements between the private organization and the Air Force will create a unique land use relationship: the Air Force and the surrounding community can develop a compatible business and technology park that enables better execution of the Air Force Mission, while supporting and enhancing local community goals. OO-ALC intends to lease government-owned land to a private organization, which will be responsible for maintenance and utility costs for the facilities constructed through the Proposed Action. This results in reduced costs for OO-ALC.

## **4.4 Unavoidable Adverse Environmental Impacts**

4.4.0.1 The discussion of potential environmental impacts (presented in Section 4.3) indicates that neither the Proposed Action nor No-Action Alternative would create unavoidable adverse environmental impacts.

## **4.5 Compatibility of the Proposed Action and Alternatives with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls**

4.5.0.1 Hill AFB is an active military facility. The current mission of Hill AFB is to provide depot repair, modification, and maintenance support to major aircraft weapon systems. There is no anticipated land-use change for Hill AFB. Therefore, implementing the proposed action would not impact current land use plans, and is consistent with such plans.

## **4.6 Relationship between the Short-Term Use of the Environment and Long-Term Productivity**

4.6.0.1 Developing the Proposed Action provides a durable setting for continued support of the Hill AFB mission objectives. Therefore, implementing the proposed alternative would improve long-term productivity of the Base. Implementing the Proposed Project could also eliminate future impacts, because it would allow proper demolition of the World War II structures containing the encapsulated asbestos and other materials.

## **4.7 Irreversible and Irretrievable Commitments of Resources**

4.7.0.1 The proposed alternatives would not cause an irreversible and irretrievable commitment of resources.

## **4.8 Cumulative Impacts**

4.8.0.1 There are no reasonably foreseeable facility development actions in the area surrounding the subject property. While the WSD involves development of land along the western boundary of Hill AFB, future WSD phases have not been evaluated thoroughly enough to perform environmental analysis and determine cumulative impacts. When additional WSD proposals become concrete enough to support environmental analysis, cumulative impacts for the entire western boundary will be addressed.

## 5.0 List of Preparers

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5.0.0.1 The following Hill AFB and CH2M HILL personnel were involved in the preparation of this EA:

- Kay Winn, Hill AFB NEPA Project Manager, 75 CEG/CEVOR
- Staci Hill, P.E., CH2M HILL Project Manager
- Josephine Lee, CH2M HILL Project Engineer
- Wendy Longley-Cook, Ph.D., P.E., J.D., CH2M HILL Senior Technical Consultant



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## 6.0 List of Persons and Agencies Consulted

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6.0.0.1 The following agencies and persons were consulted during the preparation of this EA.

- CH2M HILL, Associate Hydrogeologist, OU10 Project Manager, Todd L. Isakson, [todd.isakson@ch2m.com](mailto:todd.isakson@ch2m.com), (801) 350-5222 – discussed groundwater contamination at Hill AFB. June 2006.
- CH2M HILL, Associate Scientist, Hill AFB Air Quality Project Manager, Melissa Cary, [melissa.cary@ch2m.com](mailto:melissa.cary@ch2m.com), (801) 775-6989 – discussed fugitive emissions and attainment status at Hill AFB. June 2006.
- CH2M HILL, Senior Technologist, Gary Colgan, [gary.colgan@ch2m.com](mailto:gary.colgan@ch2m.com), (801) 350-5276 – discussed geology at Hill AFB and at subject property. June 2006.
- Hill Air Force Base, 75<sup>th</sup> Civil Engineering Squadron, Base Community Planner, Bert Whipple, [albert.whipple@hill.af.mil](mailto:albert.whipple@hill.af.mil), (801) 777-2569 – discussed construction in the area of the subject property. June 2006.
- Hill Air Force Base, 75 Air Base Wing, Public Affairs, Barbara Fisher, [barbara.fisher@hill.af.mil](mailto:barbara.fisher@hill.af.mil), (801) 777-4557 – discussed makeup of Hill AFB workforce. June 2006.
- Hill Air Force Base, Environmental Management Division, Archaeologist, Jaynie Hirschi, [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil), (801) 775-6920 – requested archaeological survey and historic building information. June 2006.
- Hill Air Force Base, Environmental Management Division, Natural Resources Geographic Information Systems Specialist, Sanford Moss, [sanford.moss@hill.af.mil](mailto:sanford.moss@hill.af.mil), (801) 775-6972 – discussed flora and fauna of Hill AFB. June and September 2006.
- Hill Air Force Base, Environmental Management Division, Natural Resources Manager, Marcus Blood, [marcus.blood@hill.af.mil](mailto:marcus.blood@hill.af.mil), (801) 775-4618 – discussed endangered species at Hill AFB. June 2006.
- Hill Air Force Base, Environmental Management Division, Stormwater, Mike Petersen, [mike.petersen@hill.af.mil](mailto:mike.petersen@hill.af.mil), (801) 775-6904 – discussed Stormwater Management Plan. June 2006.
- Hill Air Force Base, Plans and Programs Directorate, Wynn Covieo, [wynn.covieo@hill.af.mil](mailto:wynn.covieo@hill.af.mil), (801) 777-5999 – discussed nature and extent of proposed action. June 2006.

6.0.0.2 To fully comply with NEPA regulations, a copy of the Proposed Final Environmental Assessment will be made available for public review and comment.

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## 7.0 References

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APPENDIX A

## Finding of No Significant Impact

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# Finding of No Significant Impact

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## Purpose and Need

This EA has been developed to analyze and document potential environmental and socioeconomic consequences associated with the proposed project, called the West Side Development (WSD), Phase 1 South. Phase 1 South involves developing approximately 44 acres of currently vacant property. Administrative office space and parking lots comprise the proposed development. Roads and utility infrastructure will be added to the vacant acreage during construction. Structures built during this phase would be used to accommodate administrative personnel who currently work at the base.

Phase 1 South is the second component of the Hill Air Force Base (Hill AFB) West Side Development. The first component of the WSD project was addressed in the *Environmental Assessment for the Space and Missile Facility* (Space and Missile EA) (JBR, 2005). Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. Findings and conclusions of the 2005 effort are incorporated by reference.

## Selection Criteria and Alternatives Considered

The WSD consists of three phases. Phase 1 involves construction of the Space and Missile Complex, addressed in the Space and Missile EA, and the proposed Enhanced Use Leasing development, which is addressed in this EA. Phase 2 involves development of additional administrative space in approximately 10 to 20 years from the date of approval by the Secretary of the Air Force (to proceed with the WSD). Phase 3 also involves commercial mixed use development, but would proceed in 15 to 25 years from the date of WSD approval. As additional WSD phases become defined enough to support environmental analysis, additional EAs will be performed.

Site selection performed in the Space and Missile EA affects the location of additional development along the western boundary of Hill AFB. The subject property has been proposed as the location for the WSD, Phase 1 South. This EA addresses only the Phase 1 South portion of the WSD because it is the only phase for which there is currently enough information to conduct an environmental analysis. The following alternatives were evaluated to determine the most efficient construction process:

- **Proposed Action:** Construct administrative office space, east of the intersection of Wardleigh Road and M Street.
- **Alternative 1:** Construct administrative space in another area of Hill AFB.
- **No-Action Alternative:** Continue use of existing World War II era structures.

Because site selection has already occurred for the initial portion of the WSD, it is not necessary to evaluate additional locations. Therefore, evaluation of another base location (Alternative 1) has been dismissed from further consideration.

## Impact on Resources

Based on the evaluation of environmental consequences in the Environmental Assessment, the Proposed Action would not cause negative environmental effects. Furthermore, air, water, and soil resources would not be negatively impacted by the Proposed Action.

Due to current and future land use of Hill AFB, the No-Action Alternative would have no change in its impact on the current environment. The No-Action Alternative could have a future significant, negative impact on worker health and safety, if currently encapsulated materials, such as asbestos and residual hazardous materials from previous uses, are disturbed and become airborne.

## Conclusion

The findings of this Environmental Assessment indicate that the Proposed Action to construct administrative space, east of the Hill AFB West Gate, will not have significant adverse effects on the human environment or any of the environmental resources as described in the Environmental Assessment. Therefore, issuance of a Finding of No Significant Impact is justified, and an Environmental Impact Statement is not required.



Environmental Protection Committee Chairman



Date



APPENDIX B

## Threatened, Endangered, and Sensitive Species

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## Threatened, Endangered, and Sensitive Species within a 10 mile radius of Hill Air Force Base

List updated Dec 2005. Includes federally listed, state listed , GRank and SRank 1-3 only.

UT Source: Utah Natural Heritage Program point locations; Federal Status, State Status, G-Rank and S-Rank from UNHP point locations attribute table.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Hill</u>	<u>Hill</u> <u>10mi</u>	<u>Federal</u>	<u>UT</u>	<u>G-Rank</u>	<u>S-Rank</u>
<b>Birds</b>							
American white pelican	<i>Pelecanus erythrorhynchos</i>		x	Not Listed	SPC	G3	S1B
Bald eagle	<i>Haliaeetus leucocephalus</i>		x	T	S-ESA	G4	S1B,S3N
Blue grosbeak	<i>Guiraca caerulea</i>		x	Not Listed	None	G5	S3B
Bobolink	<i>Dolichonyx oryzivorus</i>		x	Not Listed	SPC	G5	S2B
Burrowing owl	<i>Athene cunicularia</i>		x	Not Listed	SPC	G4	S3B
Common moorhen	<i>Gallinula chloropus</i>		x	Not Listed	None	G5	S1
Common yellowthroat	<i>Geothlypis trichas</i>		x	Not Listed	None	G5	S3S4B
Eastern kingbird	<i>Tyrannus tyrannus</i>		x	Not Listed	None	G5	S3?B
Ferruginous hawk	<i>Buteo regalis</i>		x	Not Listed	SPC	G4	S2S3B,S2N
Flammulated owl	<i>Otus flammeolus</i>		x	Not Listed	None	G4	S3S4B
Grasshopper sparrow	<i>Ammodramus savannarum</i>		x	Not Listed	SPC	G5	S1B
Lewis's woodpecker	<i>Melanerpes lewis</i>		x	Not Listed	SPC	G4	S2
Lark Bunting	<i>Calamospiza melanocorys</i>		x	Not Listed	None	G5	S2S3B
Long-billed curlew	<i>Numenius americanus</i>		x	Not Listed	SPC	G5	S2S3B
Merlin	<i>Falco columbarius</i>		x	Not Listed	None	G5	SHB,S2S3N
Mountain plover	<i>Charadrius montanus</i>		x	Not Listed	None	G2	S1B
Northern goshawk	<i>Accipiter gentilis</i>		x	Not Listed	CS	G5	S3?
Osprey	<i>Pandion haliaetus</i>		x	Not Listed	None	G5	S2B
Peregrine falcon	<i>Falco peregrinus</i>		x	Not Listed	None	G4	S2S3
Sharp-tailed grouse	<i>Tympanuchus phasianellus</i>		x	Not Listed	SPC	G4	S1S2
Short-eared owl	<i>Asio flammeus</i>		x	Not Listed	SPC	G5	S2
Snowy plover	<i>Charadrius alexandrinus</i>		x	Not Listed	None	G4	S3?B
Yellow-billed cuckoo	<i>Coccyzus americanus</i>		x	C	S-ESA	G5	S1B
<b>Mammals</b>							
Kit Fox	<i>Vulpes macrotis</i>		x	Not Listed	SPC	G4	S3?
Northern flying squirrel	<i>Glaucomys sabrinus</i>		x	Not Listed	None	G5	S3
Northern river otter	<i>Lontra canadensis</i>		x	Not Listed	None	G5	S3
Townsend's big-eared bat	<i>Plecotus townsendii</i>		x	Not Listed	SPC	G4	S3?
<b>Reptiles</b>							
Common gartersnake	<i>Thamnophis sirtalis</i>		x	Not Listed	None	G5	S2S3
Desert tortoise	<i>Gopherus agassizii</i>		x	T	S-ESA	G4	S1
Rubber boa	<i>Charina bottae</i>		x	Not Listed	None	G5	S2S3
<b>Amphibians</b>							
Northern leopard frog	<i>Rana pipiens</i>		x	Not Listed	None	G5	S3S4
<b>Fish</b>							
Bluehead sucker	<i>Catostomus discobolus</i>		x	Not Listed	SPC	G4	S3?
Bonneville cutthroat trout	<i>Oncorhynchus clarki utah</i>		x	Not Listed	CS	G4T4	S3?
June sucker	<i>Chasmistes liorus</i>		x	E	S-ESA	G1	S1
<b>Mollusks</b>							
Black gloss (terrestrial snail)	<i>Zonitoides nitidus</i>		x	Not Listed	None	G5	S1S2
Cross vertigo (terrestrial snail)	<i>Vertigo modesta</i>		x	Not Listed	None	G5	S2
Glass physa (freshwater snail)	<i>Physa skinneri</i>		x	Not Listed	None	G5	S2
Green river pebblesnail (freshwater snail)	<i>Fluminicola coloradoensis</i>		x	Not Listed	None	G2	S2S3
Lance aplexa (freshwater snail)	<i>Aplexa elongata</i>		x	Not Listed	None	G5	S2?
Sharp sprite (freshwater snail)	<i>Promenetus exacuus</i>		x	Not Listed	None	G5	S2
Swamp lymnaea (freshwater snail)	<i>Lymnaea stagnalis</i>		x	Not Listed	None	G5	S2?
Ogden Rocky (Wasatch) Mountainsnail (terrestrial snail)	<i>Oreohelix peripherica wasatchensis</i>		x	C	S-ESA	G2T1	S1
Widelip pondsail (freshwater snail)	<i>Stagnicola traski</i>		x	Not Listed	None	G2G3Q	S2?
Winged floater (freshwater mussel)	<i>Anodonta nuttalliana</i>		x	Not Listed	None	G3G4	SNA
<b>Insects</b>							
Black saddlebags	<i>Tramea lacerata</i>		x	Not Listed	None	G5	S1?
California darner	<i>Aeshna californica</i>		x	Not Listed	None	G5	S2
Desert whitetail	<i>Libellula subornata</i>		x	Not Listed	None	G4	S3?
Dot-tailed whiteface	<i>Leucorrhinia intacta</i>		x	Not Listed	None	G5	S1S2
Eight-spotted skimmer	<i>Libellula forensis</i>		x	Not Listed	None	G5	S2?
Lance-tipped darner	<i>Aeshna constricta</i>		x	Not Listed	None	G5	S1S2
Lyre-tipped spreadwing	<i>Lestes unguiculatus</i>		x	Not Listed	None	G5	S2

## Threatened, Endangered, and Sensitive Species within a 10 mile radius of Hill Air Force Base

List updated Dec 2005. Includes federally listed, state listed, G-Rank and S-Rank 1-3 only.

UT Source: Utah Natural Heritage Program point locations; Federal Status, State Status, G-Rank and S-Rank from UNHP point locations attribute table.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Hill</u>	<u>Hill</u> <u>10mi</u>	<u>Federal</u>	<u>UT</u>	<u>G-Rank</u>	<u>S-Rank</u>
Mountain emerald	<i>Somatochlora semicircularis</i>		x	Not Listed	None	G5	S2
River jewelwing	<i>Calopteryx aequabilis</i>		x	Not Listed	None	G5	S1?
Saffron winged meadowhawk	<i>Sympetrum costiferum</i>		x	Not Listed	None	G5	S2?
Striped meadowhawk	<i>Sympetrum pallipes</i>		x	Not Listed	None	G5	S2
White-faced meadowhawk	<i>Sympetrum obtrusum</i>		x	Not Listed	None	G5	S2
Utah needlefly	<i>Perlomyia utahensis</i>		x	Not Listed	None	G3	S2?
<b>Plants</b>							
Beckwith violet (other dicots)	<i>Viola beckwithii</i>		x	Not Listed	None	G4	S2
Broadleaf penstemon (figwort family)	<i>Penstemon platyphyllus</i>		x	Not Listed	None	G2G3	S2S3
Burke's whitlow-grass (mustard family)	<i>Draba maguirei</i> var. <i>burkei</i>		x	Not Listed	None	G3T2	S2
King's aster	<i>Aster kingii</i> var. <i>kingii</i>		x	Not Listed	None	G3T3	S3
Spiked standing-cypress	<i>Gilia spicata</i>		x	Not Listed	None	G4?	S1
Ute ladies' tresses	<i>Spiranthes diluvialis</i>		x	T	None	G2	S1
Wasatch Daisy	<i>Erigeron arenarioides</i>		x	Not Listed	None	G3?	S3?
Wasatch rockcress (mustard family)	<i>Arabis lasiocarpa</i>		x	Not Listed	None	G3	S3

### Federal Status

E = Endangered, T = Threatened, C = Candidate

### Utah State Status

S-ESA = Federally-listed or candidate species under the Endangered Species Act

SPC = Wildlife Species of Concern

CS = Species receiving special management under a Conservation Agreement in order to preclude the need for federal listing

### Natural Heritage Program status ranks:

G = Global, N = National, and S = Subnational

1 = critically imperiled, 2 = imperiled, 3 = vulnerable to extirpation or extinction, 4 = apparently secure, and 5 = demonstrably widespread, abundant, and secure

G#G# = range of status uncertainty, U = unrankable due to lack of info, NR = not yet ranked, NA = rank is not applicable, Q = questionable taxonomy, C = captive of cultivated only

T# = infraspecific taxon (subspecies, varieties, etc.), X = presumed extinct or extirpated, H = possibly extinct or extirpated, ? = inexact numeric rank

APPENDIX C

## Response to Comments

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DEPARTMENT OF THE AIR FORCE  
75TH CIVIL ENGINEER GROUP (AFMC)  
HILL AIR FORCE BASE UTAH

15 September 2006

Dr. W. Robert James, Ph.D., P.E.  
Chief, Environmental Management Division  
75th CEG/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

Mr. Al Herring  
3113 Tanglewood Dr.  
Layton, UT 84040

Dear Mr. Herring

Thank you for your comments on the West Side Development Environmental Assessment. This letter is our response. I will address your comments in turn:

Comment 1: First, I find the analysis to be less than convincing that there will be no impacts on animal life. In Section 3.2.4 statements are made that "Wildlife would not be affected by the Proposed Action," and "There are no known threatened or endangered species inhabiting Hill Air Force Base (AFB)." However, in Section 3.3.7.1 another statement is made that "no threatened or endangered *plant species* [emphasis added] have been identified (Moss, 2006)." Did the Moss study cover only plants? Has the site really been closely inspected for threatened or endangered animal species that could be affected (seasonal nesting birds, rodents, butterflies, insects, etc.)?

Air Force Response: The Environmental Assessment (EA) should have stated that there will be no significant impacts on animal life including birds and insects. We will make that correction. The 44 acres in question are in an area of the Base that is generally surrounded by built-up facilities and improvements including buildings, roads, parking lots, and utility lines. The vegetation has been routinely mowed and groomed over a period of years to reduce animal and insect habitat and cover that could attract birds. This helps minimize on-Base bird populations that could present a Bird Aircraft Strike Hazard (BASH). Over the years, Hill AFB has conducted several surveys of animals and plants to fulfill our obligations under the Endangered Species Act as well as to identify any State of Utah listed species. We also consult with the Fish and Wildlife Service and Utah Division of Wildlife Resources on Hill AFB animal and plant populations and habitat to support publication of our Integrated Natural Resources Management Plan (INRMP), November 2001. No known threatened and endangered (T&E) species of any kind have ever been identified residing or nesting on Hill AFB or in the surrounding communities. Certain raptors are known to pass through the area. The only animals currently believed to reside in the 44 acres of the proposed development would be small non-T&E rodents and various common insects. Based upon your comment, we are correcting the EA to add reference to the Base-wide animal and plant studies done to identify T&E species.

Comment 2: Second, I also find the sections on Safety and Occupational Health to be less than satisfactory. There is absolutely no recognition that civilians (along with military personnel and contractors) will utilize the area to be developed. I understand it is expected that one or more hotels and restaurants will be located on the site. However, I see no consideration that there is

any safety risk associated with civilian-businesses being encouraged to locate on an active military base. In contrast, much has been made about the almost infinitesimal possibility of an F16 crashing into a container of spent nuclear fuel rods stored at the proposed Private Fuel Storage (PFS) site on the Goshute Reservation. So, where is the risk analysis of a military aircraft crashing into a hotel or restaurant located on the base? Where is there consideration of the fact that military bases become targets in times of war? Are we so complacent as to think that Hill AFB is immune to attack and therefore we need not worry about mixing military and civilian activities? I, for one, am all for keeping big buffer zones around military bases because (1) they can become targets, and (2), things can go wrong even in peacetime.

Air Force Response: The entire West Side Development will take place in an area the Air Force considers safe for civilian occupation. Thousands of contractor and civilian personnel presently work throughout the proposed development zone and within the surrounding heavily built-up areas off-Base. There are currently temporary lodging facilities (hotel equivalents) and housing units belonging to the Air Force on the East side of Hill AFB, much closer to the flight line than the proposed development. As you know, there is always some safety risks associated with flying operations. However, those risks relative to the West Side Development proposal are well within previously acceptable risk levels. A more complete analysis of flying operations and environmental risk was completed July 2001 entitled *Final Environmental Assessment for the Proposed Departure Route Changes at Hill AFB, Utah*. Furthermore, although the Air Force has had little direct involvement in the environmental impact assessment of the Skull Valley proposal, there are important distinctions between the risks related to open storage of spent nuclear fuel rods in Skull Valley and the risks to civilian facilities within the Base boundary – particularly along the Western boundary away from the flight line. The Air Force cannot speak for the State of Utah, PFS or other players in the Skull Valley action, but the underlying issues are widely publicized and generally well understood.

First, the proposed nuclear storage area in Skull Valley is located directly below a high speed air corridor used for many thousands of military sorties per year. Many of them carry full bomb loads. In contrast, there are no established flying routes over the proposed West Side Development land area. Aircraft arriving at or departing from Hill AFB typically do not over-fly the area of the proposed development. The Air Force fully complies with established Department of Defense and Federal Aviation Administration (FAA) “Accident Potential Zone” and “Explosive Safety Clear Zone” standards. The accident potential zone buffers are located along the approach and departure routes at the ends of the runway. The Air Force prohibits development in those areas. The proposed development area all lays outside of the established explosive clear zones for the Base munitions storage areas.

Second: As devastating as a crash would be in a built-up civilian area, the damage would be relatively localized. In contrast, a crash of a military aircraft with bombs at typical military training speeds into one or several of hundreds of nuclear fuel rod storage casks could release immensely toxic radioactive wastes that have a 10,000 year half life. Critics of the open nuclear storage proposal also pointed out that in a post-9/11 environment, the storage yard could also be a target for an intentional “crash” or attack by a military or civilian aircraft. When conducting risk analysis, the potential harm caused by the event is heavily weighted. The more devastating the harm, the more precautions the proponent must take. In the case of the proposed West Side Development, the potential harm from an aircraft accident or attack is substantially smaller than the potential harm to a Skull Valley storage area from a nuclear material release. There has been no separate risk analysis for aircraft strikes related to the West Side Development proposal. However, the Air Force and FAA have extensive flight safety programs that do evaluate risks on a world-wide or nation-wide basis. Thorough site-specific aircraft accident risk analysis has probably only been conducted for the Skull Valley site. This analysis was a requirement of the application for a storage permit and in part because of the public interest and controversy concerning the proposal. Still, even at Skull Valley, you correctly characterized the risk it identified for the likelihood of an aircraft

crash, even along the dedicated air corridor, as “infinitesimally” small. In the Skull Valley case, the potential consequences of a crash or attack drove the risk question. Finally, although military bases do become targets during time of war and may also be targets in peace time, there are a number of other high-value or symbolic targets within the State of Utah. These range from critical communications nodes to significant power generation hydro-electric dams to oil refineries to densely populated areas. We therefore consider the risk to any specific proposed facility within the West Side Development area to be no greater than the risk, generally to other “high value” facilities in the local area.

Third: The proposed development does not lie below an established or published flight corridor, arrival or departure route. Therefore, under Air Force rules and the National Environmental Policy Act, it is not necessary that we specifically study the potential safety impacts of a crash into the proposed development area. We, therefore, consider that no change in the existing EA is necessary based on your safety comments.

Please remember that this EA addresses the West Side Development only as a vague overarching proposal. It specifically examines only the 44 acres of the current proposed phase. Plans for other phases are too speculative now for thorough environmental analysis. Hill AFB will prepare and publish further documents as the concepts for future phases, if any, mature to the point that a meaningful study is possible.

As previously discussed, Hill AFB will continue to provide you notice of pending environmental impact analysis projects at the Base including the availability of draft Environmental Assessments or Environmental Impact Statements. We appreciate your service on the Hill AFB Restoration Advisory Board. We especially appreciate your comments that have helped us identify and correct potential weaknesses in our environmental document.

Questions or comments about this response should be directed to Ms. Kay Winn, 75 CEG/CEVOR, (801) 777-0383.

Sincerely

A handwritten signature in black ink, appearing to read "W. Robert James". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

W. ROBERT JAMES, Ph.D., P.E.  
Chief, Environmental Management Division  
75th Civil Engineering Group